RIS3 Monitoring: The Case of the Basque Country

Santiago de Compostela

December 4, 2018
Monitoring RIS3: The Case of The Basque Country
General view of RIS3 Euskadi deployment

Phases of the process

Phase 0: 2014
«Elaboration and approval»

Phase 1: 2015
«Implementation and Deployment – 1»

Phase 2: 2016
«Deployment – 2 and Evaluation»

Phase 3: 2017/2018
«Dynamisation»

Monitoring RIS3: The Case of The Basque Country

**MISSION:** To improve welfare, sustainable economic growth and employment in Basque society through a research and innovation policy based on **smart specialisation and improvement of the efficiency** of the Basque System of Science, Technology and Innovation.

**RIS 3 - Regional & Innovation Smart Specialisation Strategy**

*Smart specialisation seeks to identify the characteristics and unique assets of each country and region, highlighting its competitive advantage and bringing together stakeholders and regional resources around a vision of the future that tends towards excellence, maximizing, in turn, the flow of knowledge.*
4 strategic lines and 2 transverse axis are established in the plan, which lead to different operational objectives and goals to achieve in year 2020.

**INDUSTRIAL LEADERSHIP**
*Strategic Line 2.* To strengthen industrial leadership through public-private partnerships.

**SMART SPECIALIZATION**
*Strategic Line 1.* To promote the smart specialisation strategy through science, technology and innovation aimed at responding to the social challenges of the Basque Country.

**HUMAN CAPITAL**
*Strategic Line 4.* To ensure the development of human capital in science, technology and innovation.

**EXCELLENCE**
*Strategic Line 3.* To raise the level of excellence of the Basque Science, Technology and Innovation System.
Phase 0. Elaboration of RIS3 strategy
Selection of smart specialisation areas

3 smart specialisation strategic priorities and 4 opportunities niches have been selected, taking into account business and scientific-technological capabilities, together with market opportunities
A governance system is established for science, technology and innovation with a multilevel approach that incorporates the main public and private players.
### Phase 1. 2015- «Implementation and deployment – 1»

**Setting up the governance system: Functions**

<table>
<thead>
<tr>
<th>NAME</th>
<th>FUNCTION</th>
<th>COMPOSITION</th>
</tr>
</thead>
</table>
| **Basque Council for Science, Technology & Innovation (CVCTI)** | • Catalyst and coordinating instrument for the Basque Science, Technology and Innovation System  
• Strategic guidance  
• Advice and promotion of political science, technology, research and innovation in the Basque Country  
• Supervising the STIP implementation process | • Basque Government  
• 3 Province Councils (DFB, DFG, DFA)  
• 3 Universities (UPV/EHU, Deusto, MU)  
• 2 Technological Corporations (Tecnalia, IK4)  
• Ikerbasque - Basque Foundation for Science  
• Innobasque – Basque Innovation Agency  
• Jakiunde - Basque Academy of Sciences, Arts and Letters  
• 4 Enterprises (representatives of BERD) |
| **Scientific Committee** | • Advisor body to the CVCTI  
• Advisory role in the development and implementation of the STIP  
• Reporting on important international initiatives in STI | 10 professionals of recognized standing in the field of science, technology, research and innovation |
| **Commissioner for Science, Technology and Innovation** | • Secretary of the CVCTI  
• Coordinating the overall RIS3 ‘live process’  
• Carrying out monitoring and evaluation reports related to the Plan | Secretary General of the Presidency |
| **Interdepartmental Committee** | • Interdepartmental coordination  
• Managing the RIS3 ‘live process’  
• Evaluating the Plan instruments  
• Identify corrective actions  
• Coordinate governance with the RVCTI agents | Main departments of the Basque Government with significant activities in research and innovation:  
• Public Administration and Justice  
• Economic development and Competitiveness  
• Treasury and Finance  
• Education  
• Health  
• Others |
| **Interinstitutional Committee** | • Coordination between the Basque institutions of R&I support programs and activities  
• Looking for operational synergies to optimise resource allocation and utilisation | Extension of the Interdepartmental Committee to representatives of:  
• Three Province Councils  
• Eudel – Association of Basque municipalities |
Steering groups are created counting with participation of the administration, companies, clusters and scientific and technological players. Their main function will be to coordinate and drive forward the deployment of the RIS3 strategy and the setting up of spaces for entrepreneurial discovery.

Composition of Steering groups can be found on:
RIS3 priority areas and technologies

**ENERGY**
- Solar Thermoelectric
- Oil & gas
- Wind (off-shore) and Marine (Wave)
- Smart Grids
- Electric traction
- Energy Storage (T)
- Power electronics (T)
- Energy Efficiency in Industry (T)

**ADVANCED MANUFACTURING**
- Smart, flexible machines and systems
- Collaborative robotics
- Cyber-physical systems. “Internet of things”
- Artificial vision and augmented reality
- New materials and their manufacturing processes
- Additive manufacturing
- Distributed manufacturing and remote management
- Big Data. Cloud Computing

**BIOSCIENCES-HEALTH**
- Personalised medicine (diagnostic, prognostic, monitoring and treatments)
- Advanced therapies and regenerative medicine
- Rehabilitative medicine
- E-health / TICs
- Equipment, components and instruments
- Big data applied to health

**FOOD**
- Healthy Eating –personalised diet–
- New Production systems (new marine aquaculture and offshore species, Ecological, …)
- New Gastronomic Developments for children and elderly people
- Safe, quality food – new preservation technologies–
- Incorporating ICTs into production, logistics and marketing processes
- Functional Food

**URBAN HABITAT**
- Industrialised construction and virtual modelling
- Integral refurbishment and urban regeneration
- Smart cities/towns, neighbourhoods and buildings (smart cities, advanced home automation, zero-emission construction)
- New materials, sustainable construction (insulating, renewable, bio- and nano-materials)
- Accessible buildings and cities/towns Vertical/horizontal mobility

**CULTURE AND CREATIVE IND.**
- Audiovisual and digital content
- Videogames
- Fashion
- Design
- Performing Arts
- Music
- Cultural Heritage
- Language Industries

**ECOSYSTEMS**
- Ecodesign and servitization
- Waste recovery (including renewable raw materials)
- Technologies to control and cut pollution (Cleantech)
- Water and soil treatment, reclamation, monitoring
- Environmental renaturalization and restoration, green infrastructure, etc.
- Ecosystem services
General view of RIS3 Euskadi deployment
Phase 2 of the process

Phase 2: 2016 «Deployment – 2 and Evaluation»

1. DEPLOYMENT OF STEERING GROUPS
2. MONITORING EVALUATION
3. POLICY MIX ADAPTATION
I. Deployment of Steering groups

«New Spaces entrepreneurial discovery»

1. Creation of working or thematic groups

2. Implementation of spaces of entrepreneurial discovery:
   • Intra groups
   • Inter groups

3. Selection of strategic projects

4. Communication and dissemination
The RIS3 deployment is supported by the creation of thematic working groups with selected participants for their knowledge and experience, both in the 3 strategic priorities...

<table>
<thead>
<tr>
<th>RIS3</th>
<th>Area</th>
<th>Work groups</th>
<th>Coordinators</th>
</tr>
</thead>
</table>

*Working Groups and their composition can vary over time, adapting to the needs of the process*
Phase 2: 2016 «Deployment - 2 and Evaluation»

Setting up the Working Groups

... as in the 4 territories of opportunity

<table>
<thead>
<tr>
<th>RIS3</th>
<th>Area</th>
<th>Work groups</th>
<th>Coordinators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Feeding</td>
<td>1. Healthy Food - personalized diet (mixed work group feeding - health)</td>
<td>1. Azti</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. New Food Production Systems - demedicalization of animal production</td>
<td>2. Neiker</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Integration of ICT in production, logistics and marketing processes</td>
<td>3. Cluster IIAA / Gaia</td>
</tr>
<tr>
<td>Territories</td>
<td>Urban habitat</td>
<td>1. Industrialized construction and virtual modeling</td>
<td>1. Eraikune</td>
</tr>
<tr>
<td>of Opportunity</td>
<td></td>
<td>2. Integral Rehabilitation and Urban Regeneration</td>
<td>2. Visesa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Smart cities, neighborhoods and buildings</td>
<td>3. IK4/Idom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. New Materials for Sustainable Construction</td>
<td>4. Tecnalia</td>
</tr>
<tr>
<td>Ecosystems</td>
<td>Integrated in</td>
<td></td>
<td>IHOBE</td>
</tr>
<tr>
<td></td>
<td>the Pilot Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. RVCTI Agents</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Sectorial Agents</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
II. Monitoring and Evaluation

1. Comprehensive monitoring and evaluation system:
   • PCTI Follow-up Report
   • Evaluation of the contribution of instruments and agents
   • Comparative diagnosis of SVCTI (Innobasque: Basque Innovation Agency)

1. Monitoring the strategy (PCTI Euskadi 2020)
   How do the objectives evolve?

2. Evaluation of instruments
   How do they contribute to the objectives?

3. Evaluation of agents

4. Comparative evaluation of the Basque System of Science, Technology and Innovation
   Are objectives still appropriate?

It proposes a system of monitoring and integral evaluation of the strategy ...


Science, Technology and Innovation Plan ‘STIP Euskadi 2020’ information
... which integrates the evaluation of results and impact at different levels

The contribution of the strategy to the mission will be evaluated ex-post based on the contribution of innovation to economic growth and the impact assessment of the **HAZITEK** program.
An external evaluation was carried out by Kevin Morgan and Orkestra of the RIS3 deployment process, being evaluated very positively in the context of what the rest of the European regions are doing.

- based on interviews with 35 people from government, business, research and other agencies
- combined with a review of the many working documents being produced by the RIS3 process
- explain and analyse the most significant developments in the process of implementing the Basque RIS3
- involvement and collaboration of multiple government departments became recognised: from leadership of the Department of Competitiveness and Economic Development (DCED) 2013 to leadership of the Department of the President (DP) 2014
- creating steering groups as spaces to bring together private and public actors emerged from the DCED and SPRI, alongside recognition that existing cluster associations should play a key role
- Basque Country has taken full advantage of the opportunities presented by RIS3 to review and reform both its regional innovation system and its regional innovation strategy
- RIS3 can be sustained across electoral cycles regardless of the government of the day

INDIZEA (2013), the Basque Innovation Index, brings an innovative vision to the evaluation of innovation, measuring business investments in R&D&I and analyzing its impact on improving productivity.

**PROJECT OBJECTIVES**

- Measure the real investments of Basque companies in innovation, considering the extension of its scope through the 7 types of intangible capital.
- Calculate the contribution of these investments to the improvement of productivity, serving as a help to those Basque companies that want to know what factors can help them improve their competitiveness.
- Integrate this macroeconomic approach into a deeper report that also includes the contribution of Science and Technology, Business and the Public Sector.
- Serve as a contrast element of the innovation policies and the effectiveness in their implementation, by offering an a posteriori measure of their economic impact.

INDIZEA is one of the key initiatives promoted by Innobasque to develop the evaluation function of the Basque Innovation System, aimed at improving its efficiency and effectiveness.

To download the report:
https://www.innobasque.eus/microsite/politicas_de_innovacion/proyectos/indizea/
The ‘Innovation Innobasque 2016 Report’ provides a comparative diagnosis of the situation of Basque Science, Technology and Innovation System (2005-2014) compared with other countries and regions.

The ‘**Innovation Innobasque 2016 Report**’: overview

- **Periodic Report**

- **Innobasque: Monitoring & Evaluation function (Basque STI System)**

- In 2013 it was published Indizea, Basque Innovation Index

- The Innobasque Innovation Report 2016 emerges as an **evolution of Indizea**

- Sources: the main statistics elaborated by Eustat, Eurostat, the European Commission, Ikerbasque, Basque Government, UPV / EHU and Innobasque itself

## Basque Country RIS3: Operational Objectives and Monitoring indicators

<table>
<thead>
<tr>
<th>Operational Objectives</th>
<th>Indicator</th>
<th>Starting Point</th>
<th>2020 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concentrate resources and investments in R&amp;D&amp;I in the areas of specialization</td>
<td>% of CCTT research multi-localized and CICs aligned with RIS3 strategic priorities</td>
<td>76% (2013)</td>
<td>82%</td>
</tr>
<tr>
<td>2. Enhancing fundamental research and experimental development</td>
<td>Mix of R &amp; D activity (% Inv. Fundamental /% Inv. Industry /% Applied /% Experimental Development)</td>
<td>14/47/39 (2012)</td>
<td>15/30/55</td>
</tr>
<tr>
<td>3. To orient to results the System of Science, Technology and Innovation</td>
<td>Indexed scientific publications</td>
<td>4.637 (2013)</td>
<td>7.500</td>
</tr>
<tr>
<td></td>
<td>% of publications indexed in first quartile</td>
<td>54,7% (2013)</td>
<td>55%</td>
</tr>
<tr>
<td></td>
<td>% sales new products at check-in</td>
<td>12,48% (IUS 2014)</td>
<td>15%</td>
</tr>
<tr>
<td>4. Reinforcing international funding for R&amp;D&amp;I</td>
<td>% Foreign financing of R&amp;D&amp;I</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td>5. Increase number of innovative companies</td>
<td>Innovative companies with more than 10 employees over total</td>
<td>45,5% (2012)</td>
<td>50%</td>
</tr>
<tr>
<td>6. Improve the qualification of research staff</td>
<td>Percentage of researchers with doctorates over total research staff</td>
<td>29% (2013)</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>Research staff of companies</td>
<td>8,6% (2013)</td>
<td>10%</td>
</tr>
</tbody>
</table>
In the first two years of deployment of the PCTI 2020 there has been a high degree of compliance with its operational objectives, with the weight of experimental development in the R&D&I mix being the indicator that presents the greatest difficulties.

<table>
<thead>
<tr>
<th>Operational Objectives</th>
<th>Indicator</th>
<th>Degree of progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concentrate resources and investments in R&amp;D&amp;I in the areas of specialization</td>
<td>% of CCTT research multi-localized and CICs aligned with RIS3 strategic priorities</td>
<td>Green</td>
</tr>
<tr>
<td>2. Enhancing fundamental research and experimental development</td>
<td>Mix of R &amp; D activity (% Inv. Fundamental /% Inv. Industry / applied /% Experimental Development)</td>
<td>Red</td>
</tr>
<tr>
<td>3. To orient to results the System of Science, Technology and Innovation</td>
<td>Indexed scientific publications</td>
<td>Yellow</td>
</tr>
<tr>
<td></td>
<td>% of publications indexed in first quartile</td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td>EPO Patent Applications</td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td>% sales new products at check-in</td>
<td>Green</td>
</tr>
<tr>
<td>4. Reinforcing international funding for R&amp;D&amp;I</td>
<td>% Foreign financing of R&amp;D&amp;I</td>
<td>Green</td>
</tr>
<tr>
<td>Boosting Basque participation in H2020</td>
<td>% Basque financing of the total funds of the framework program</td>
<td>Green</td>
</tr>
<tr>
<td>Attracting international private investment in R&amp;D&amp;I</td>
<td>International annual private funding</td>
<td>Yellow</td>
</tr>
<tr>
<td>5. Increase number of innovative companies</td>
<td>Innovative companies with more than 10 employees over total</td>
<td>Yellow</td>
</tr>
<tr>
<td>6. Improve the qualification of research staff</td>
<td>Percentage of researchers with doctorates over total research staff</td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td>Research staff of companies</td>
<td>Green</td>
</tr>
</tbody>
</table>

The degree of compliance with the total R&D investment reached 92% in 2015 in the Basque Country, with international financing positively standing out, while corporate financing was 12.6% lower than estimated.
STIP (PCTI) operational objectives (2018)

1. Concentrate resources and investments in R&D&I in the areas of specialization
- % Invest
- % research aligned RIS3 strategic priorities

2. Enhancing fundamental research and experimental development
- % Investigación Fundamental R&D
- % Experimental R&D

3. To orient to results the System of Science, Technology and Innovation
- Indexed scientific publications
- % of publications indexed in first quartile
- EPO Patent Applications
- Solicitudes de patentes EPO

4. Reinforcing international funding for R&D&I
- % Financiación en R&D&I
- % Foreign financing of R&D&I

5. Increase number of innovative companies
- % Empresas innovadoras entre las más de 10 empleados

6. Improve the qualification of research staff
- % Personal Investigador con doctorado
- % researchers with doctorate

- 2018
- 2020 Goal

- 2018
- 2020 Goal

- Ventas nuevos productos en facturación empresarial
- % sales new products at check-in

- 2018
- 2020 Goal
6 ADDITIONAL CHALLENGES:

3.1. Dynamize the Steering Groups.
3.2. Drive collaborative tractor projects.
3.3. Reinforce the closeness to the system market.
3.4. Enhance basic research excellence in RIS 3 Areas
3.5. To promote talent and vocations in Science and Technology.
3.6. Increase awareness of Basque society.
### Economic scenarios R&D Investments (Thousands euros)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STIP Budget</td>
<td>Real Eustat (1) + Projection (2)</td>
</tr>
<tr>
<td>Public Finan.</td>
<td>2.520</td>
<td>2.433</td>
</tr>
<tr>
<td>GV</td>
<td>1.887</td>
<td>1.984</td>
</tr>
<tr>
<td>DDFF</td>
<td>274</td>
<td>95(1)</td>
</tr>
<tr>
<td>AGE</td>
<td>360</td>
<td>354</td>
</tr>
<tr>
<td>Companies Finan.</td>
<td>4.351</td>
<td>3.710</td>
</tr>
<tr>
<td>International Finan.</td>
<td>524</td>
<td>523</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7.394</td>
<td>6.667</td>
</tr>
<tr>
<td>TOTAL + DDFF budgets for innovation and entrepreneurship (3)</td>
<td>6.792</td>
<td>92%</td>
</tr>
</tbody>
</table>

(1) Source: Eustat. R&D Survey 2014-2016. Eustat does not include the support programs for innovation and entrepreneurship of the Provincial Councils, which in 2014-2016 had a budget of more than € 70 million.

(2) Sources: - Basque Government. Budgets and internal projections, which incorporate an annual growth rate of 5% in R+D+i.
- DDFF and AGE. Projection based on 2016 Eustat data, estimating an annual growth rate of 5%.
- Business. Projection from Eustat 2016, estimating a growth of 5% in 2017/2018 and of 6.5% in 2019/2020
- International. Projection based on the Basque R+D+ i Strategic Notebook and the Observatory of participation.

(3) Internal sources: Estimate based on the analysis of the support programs for innovation and entrepreneurship of the DDFFs between 2014 and 2017.

The expected contribution of ERDF (European Regional Development Fund) is 78.7 million
### Positive situation

1. Basque Country RIS3: Complete deployment
2. Compliance with Basque Government Budget (104%)
3. Positive results:
   - Revenue from new products
   - Scientific publications of excellence
   - International financing of R&D

### Summary of Warning Signs

1. Insufficient recovery of business investment in R&D. Especially projects closest to the market.
2. Limited (i) innovation in SMEs:
   a) (i) Technology: products and processes.
   b) (i) non-technological: marketing and organization / design and brand registrations.
3. Insufficient incorporation of researchers in companies.

### Actions to be reinforced

1. Strengthen programs that support the business (R&D) closest to the market
2. Support projects: (i) technological innovation and (i) non-technological innovation in SMEs
3. Accelerate the incorporation of researchers in companies
SPRI, Basque Business Development Agency, dependent of the Basque Government, annually manages various aid programmes on R&D, aimed at companies, and also at the RVCTI (Basque Science, Technology and Innovation Network), which are the subject of monitoring and evaluation in order to assess the results, having developed a methodology called SIME (monitoring and evaluation system), which uses indicators covering the entire cycle of each programme, displaying information on resources, results and impact, which are measured at various points throughout the project life.
SIME: I+D+I Basque Goverment programmes managed by SPRI

Programmes managed by SPRI according with technological transfer phase and orientation

**Generation of the avant-garde scientific-technological base**

- **EMAITEK+**
  - CTT & CICs base funding

- **CIC Programme**
  - Base funding for CRCs (Cooperative Research Centres)
  - Development of excellence ST (Science & Technology) capacities
  - Development of emerging sectors

- **EMAITEK**
  - Base funding for Technology Centres and Corporations.
  - Adjustment to a results-based model (taking advantage of opportunities and meeting company needs)

**Consolidation and orientation towards socio-economic needs**

- **ELKARTEK**
  - RVCTI Projects
  - Three different tipologies

  - **ELKARTEK Type 1**
    - Collaborative fundamental research projects

  - **ELKARTEK Type 2**
    - Research projects with high industrial potential led by R&D Companies Units

- **ETORTEK**
  - RVCTI Projects
  - Oriented to develop PCTI areas and sectoral diversification
  - Excellence, cooperation, knowledge transfer...

- **SAIOTEK**
  - RVCTI Projects
  - Non-oriented generic research. Specialization
  - Excellence, critical masses, cooperation...

**Orientation to results and business requirements**

- **HAZITEK**
  - Company projects
  - Two different tipologies

  - **HAZITEK (strategic)**
    - Cooperation projects
    - Industrial Research and Experimental Development
    - Within RIS3 priorities

  - **HAZITEK (competitive)**
    - Company projects/RVCTI
    - Industrial Research and Experimental Development
    - New products/companies...

- **ETORGAI**
  - Company Cooperation projects
  - Applied / industrial research
  - Strategic business initiatives Sector Diversification
  - Cooperation, connection capabilities c-t and company, internationalization, traction...

- **GAITEK**
  - Company projects
  - Research & Development
  - New products...

  - **NETs**
    - Companies/RVCTI projects
    - Research & Development
    - New companies...

- **Today Programmes (2016=>)**

- **Old Programmes**

In both blocks there are cross-interventions of the rest of the agents (the business R&D Units in RVCTI projects and the Technology Corporations in the company projects)
SIME: M&E is a key tool to meet the significant needs of the Basque System of Innovation

**M&E Objectives**

- To measure the impact of R&D programmes on wealth and employment
- To identify the contribution of R&D programmes to sector strategies
- To find out the performance of the R&D activities carried out by different agents in the system
- To have an aggregated perspective at a Basque Country level

**Benefits of M&E**

- To improve the allocation of resources
- To justify to society the resources allocated to R&D&i above other government priorities
- To facilitate the design of new, more results-based R&D support instruments
- To improve the allocation of resources according to the beneficiary collectives and programmes with a greater contribution to the system
- To contribute to the design, monitoring and evaluation of the system, policies and STI [Science, Technology and Innovation] plans
- To have an overview of the status and results of the Basque system of aid to R&D and its progression over time, which backs their existence and strength
- To enable a comparison to be made with other countries or regions of reference
**M&E Objectives**

- To have accurate and structured knowledge of the resources, results and impact of projects and programmes

**Benefits of M&E**

- To support decision-making regarding the design of new programmes and/or for the continuity, reorientation or finalisation of existing programmes
- The capacity to deal efficiently with requests for information related to the resources, results and impact of R&D support programmes (such as, for example, reporting for the EIB [European Investment Bank])
- To improve the evaluation of draft projects with a stricter application of expected impact and results criteria
SIME: designed to cover and arrange data with numerous parameters that offer key information about the innovation system. It meets the SPRI's own management needs and provides valuable knowledge and feedback to define Basque science, technology and innovation policies.
## Monitoring RIS3: The Case of The Basque Country

### Type of indicators
- Resource indicators (input)
- Project results indicators (output)
- Impact indicators (outcome)

### Levels of analysis
- R&D programmes: analysis and specific evaluation of each and every one of the SPRI R&D programmes, with monitoring at each level
- Basque STI [science, technology and innovation] system: aggregated and comparative analysis of all the R&D programmes together in order to see the total resources and generated impact in the Basque Country

### R&D programmes
- Covering all R&D programmes managed by SPRI:
  - Aimed at the RVCTI
  - Aimed at companies

---

**SIME: makes it possible to get an integral perspective**

---

**spri**
SIME: indicators in question cover each programme’s entire cycle, the identification of mobilised resources up to their results and impact.

<table>
<thead>
<tr>
<th>Type of indicators</th>
<th>RESOURCES (mobilised resources)</th>
<th>RESULTS (achieved by the end of the projects)</th>
<th>IMPACT (achieved when results are put to use)</th>
</tr>
</thead>
</table>
| Programmes supporting the RVCTI | • Subsidy granted  
• Mobilised R&D expenditure  
• No. of supported projects  
• No. of researchers  
• No. of supported companies  
• Establishing partnerships  
• Etc. | • New knowledge  
• Patents  
• Publications  
• Employment in R&D  
• Etc. | • Transfer of knowledge to the business world |
| Programmes supporting companies | • Scientific-technological results (new or improved products/processes)  
• Improvements to the R&D capacity |                                                                                                                | • Employment  
• Turnover  
• Internationalisation |

For this purpose they include input (resources), output (results) and outcome (impact) indicators.
SIME: requires continual monitoring with different measurement points throughout the projects’ life

- The indicators are measured at four points throughout the project’s life.
- The information obtained at each measurement point depends on the type of indicator, offering an expectation or real data, according to the case in question.

### Measurement points

- **Ex-ante**
  - Approval and start of project

- **Progress**
  - Development of "multiannual" project

- **Completion (complete)**
  - Project finalisation
  - 2-3 years after finalisation

### Type of information obtained at each measurement point

- **Resources**
  - Committed
  - Real / Expectation
  - Real

- **Results**
  - Expectation
  - Real / Expectation
  - Real

- **Impact**
  - Expectation
  - Revised expectation
  - Real

The projects’ life-cycle marks the availability of some of the indicators to be obtained (e.g. the impact must be measured with a certain degree of offset after the projects have finished).
### SIME: parameters and assessments are gathered regarding certain indicators at each of these points

Information gathered for each type of indicator in the different measurement points

<table>
<thead>
<tr>
<th>Types of indicators</th>
<th>Measurement points</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Scientific and technological results</td>
</tr>
<tr>
<td>Categorisation of beneficiaries and projects</td>
<td>At the start of the project (Ex-ante)</td>
<td>Real</td>
</tr>
<tr>
<td>Resources</td>
<td>During the project (Progress)</td>
<td>Data recovery</td>
</tr>
<tr>
<td></td>
<td>At the end of the project (Completion)</td>
<td>Data recovery</td>
</tr>
<tr>
<td></td>
<td>Ex-post</td>
<td>Data recovery</td>
</tr>
</tbody>
</table>
Monitoring RIS3: The Case of The Basque Country

**Call monitoring reports**

- Prepared on a yearly basis
- Coverage of the commitments with the **EIB**, with regard to the ongoing calls
- Furthermore, they include ex-post analysis

**Annual overview report: SIME**

- Prepared on a yearly basis
- Displays and analyses the R&D activity that is mobilised on a yearly basis, distinguishing three different groups:  
  - Injected activity
  - Completed activity
  - Consolidated activity
- For this purpose, it adds information from the reports of different calls:
  - Calls launched during the year (representing the volume of R&D activity injected into the system every year, to which impact expectations can be associated). Aggregation ex-ante reports
  - Calls completed the previous year (representing the R&D activity completed on a yearly basis, which can start to generate impact). Aggregation completion reports
  - Calls completed three years ago (representing activity with consolidated impact). Aggregation ex-post reports
- Comparison with macro-indicators of statistics in the Autonomous Community of the Basque Country
- Evolution analysis at a resources, results and impact level

Furthermore, M&E has sufficient flexibility and potential to carry out other specific analyses on request, based on the systematically collected information.
Monitoring and evaluation report index 20XX

Summary of figures and conclusions

Introduction

Resources & beneficiaries

Results

Impact

RIS3 Analysis

Analysis of temporal evolution

Evaluation

Detailed contents

• Executive summary

• Objectives and scope of the annual report
• Summary of the monitored and evaluated R&D programmes
• Report structure

• Subsidy and mobilised resources
• Participating agents and companies

• S&T results achieved
• Consolidation of R&D activities in companies and agents
• Assessment of the RVCTI’s contribution to companies’ R&D

• Impact on employment
• Impact on turnover
• Other impacts (generation of new activity, internationalisation)

• Evolution of the resources injected into the Basque R&D system (comparison of annual injected activity trends)
• Evolution of S&T results and consolidation of R&D in Basque companies and agents (comparison of annual completed activity trends)
• Evolution of the estimated real impact on the Basque business fabric (comparison of annual consolidated activity trends)

• Overall perspective
• Contribution to the PCTI/RIS 3 priorities
### Previous activity (completed/consolidated)

<table>
<thead>
<tr>
<th>Call</th>
<th>Projects</th>
<th>Total Budget (Euros)</th>
<th>Subsidy (Euros)</th>
<th>Proyects (Ex – ante)</th>
<th>Subsidy (Ex – Ante) (Euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etorgai 2014</td>
<td>29</td>
<td>102,521,928 €</td>
<td>27,084,730 €</td>
<td>29</td>
<td>28,837,645 €</td>
</tr>
<tr>
<td>Gaitek 2014</td>
<td>529</td>
<td>125,747,816 €</td>
<td>23,082,874 €</td>
<td>799</td>
<td>36,365,716 €</td>
</tr>
<tr>
<td>NETs 2014</td>
<td>45</td>
<td>11,729,128 €</td>
<td>2,396,417 €</td>
<td>82</td>
<td>3,785,714 €</td>
</tr>
<tr>
<td>Elkarte 2015</td>
<td>59</td>
<td>27,636,076 €</td>
<td>20,100,000 €</td>
<td>59</td>
<td>20,100,100 €</td>
</tr>
<tr>
<td>Emaitek+ 2016</td>
<td>14</td>
<td>52,965,936</td>
<td>52,650,000</td>
<td>14</td>
<td>51,070,500 €</td>
</tr>
</tbody>
</table>

### 2017: Injected activity

<table>
<thead>
<tr>
<th>Call</th>
<th>Projects</th>
<th>Total Budget (Euros)</th>
<th>Subsidy (Euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazitek 2017</td>
<td>755</td>
<td>270,958,474 €</td>
<td>81,559,669 €</td>
</tr>
<tr>
<td>Estratégicos</td>
<td>35</td>
<td>106,998,860 €</td>
<td>41,517,714 €</td>
</tr>
<tr>
<td>Competitivos</td>
<td>720</td>
<td>163,959,614 €</td>
<td>40,041,955 €</td>
</tr>
<tr>
<td>ELKARTEK 2017</td>
<td>68</td>
<td>35,982,269 €</td>
<td>30,000,000 €</td>
</tr>
<tr>
<td>Tipo 1</td>
<td>27</td>
<td>24,017,731 €</td>
<td>24,017,731 €</td>
</tr>
<tr>
<td>Tipo 2</td>
<td>35</td>
<td>11,297,283 €</td>
<td>5,648,641 €</td>
</tr>
<tr>
<td>Tipo 3</td>
<td>6</td>
<td>667,256 €</td>
<td>333,628 €</td>
</tr>
<tr>
<td>EMAITEK+ 2017</td>
<td>14</td>
<td>55,193,000 €</td>
<td>55,193,000 €</td>
</tr>
</tbody>
</table>

---

**RESULTS AND IMPACT**

Analysis performed on representative sample of projects

**RESOURCES AND BENEFICIARIES**

Analysis performed on 100% of projects

**Previous activity: results and Impact (calls finished years before)-2017: Injected activity last calls**
SIME 2017: Injected activity

Evolution 2016-2017: increase in subsidies by 14%

The budget has increased by 8% and the number of companies by 5%
SIME 2017: Results (evolution)

Results recovered in 2016

2013

- Publications: 1,273
- Patents: 90
- Technology Transfer: 50 M€
- Ratio of Publications: 21.7 per M€ subsidy
- Ratio of Patents: 1.5 per M€ subsidy

2013-2014

- Publications: 1,218
- Patents: 93
- Technology Transfer: 48 M€
- Ratio of Publications: 26.7 per M€ subsidy
- Ratio of Patents: 2.0 per M€ subsidy

2014

- Publications: 1,218
- Patents: 93
- Technology Transfer: 48 M€
- Ratio of Publications: 26.7 per M€ subsidy
- Ratio of Patents: 2.0 per M€ subsidy

2014-2015

- Publications: 917
- Patents: 62
- Technology Transfer: 58 M€
- Ratio of Publications: 16.9 per M€ subsidy
- Ratio of Patents: 1.1 per M€ subsidy

2015

- Publications: 917
- Patents: 62
- Technology Transfer: 58 M€
- Ratio of Publications: 16.9 per M€ subsidy
- Ratio of Patents: 1.1 per M€ subsidy

2015-2016

- Publications: 1,302
- Patents: 127
- Technology Transfer: 48 M€
- Ratio of Publications: 22.0 per M€ subsidy
- Ratio of Patents: 2.1 per M€ subsidy


Monitoring RIS3: The Case of The Basque Country
Regarding the impact achieved, evolution is observed within the average values of previous years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment generated</th>
<th>Turnover</th>
<th>Improvement in internationalization</th>
<th>Improvement of competitiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1,213 (+2% on 2010)</td>
<td>396 M€ (+2% on 2010)</td>
<td>53% (-4pp)</td>
<td>55% (-3pp)</td>
</tr>
<tr>
<td>2014</td>
<td>1,097 (+1% on 2011)</td>
<td>488 M€ (+2% on 2011)</td>
<td>49% (-4pp)</td>
<td>52% (-7pp)</td>
</tr>
<tr>
<td>2015</td>
<td>1,221 (+2% on 2012)</td>
<td>466 M€ (+1% on 2012)</td>
<td>56% (+7pp)</td>
<td>45% (+3pp)</td>
</tr>
<tr>
<td>2016</td>
<td>1,134 (+1.3% on 2013)</td>
<td>438 M€ (+2.0% on 2013)</td>
<td>46% (+10pp)</td>
<td>48% (+3pp)</td>
</tr>
</tbody>
</table>
## RIS3 Energy priority: resources injected-2017 calls

### Summary: budget, grant and number of projects, priority RIS3 Energy by programmes (M€, %, Nº, 2017 calls)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Budget (M€)</th>
<th>Subsidy (M€)</th>
<th>No. of projects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Energy</td>
<td>% Energy / Total programme</td>
</tr>
<tr>
<td>Hazitek (competitive)</td>
<td>163,9</td>
<td>19,8</td>
<td>12%</td>
</tr>
<tr>
<td>Hazitek (strategic)</td>
<td>106,9</td>
<td>15,2</td>
<td>14%</td>
</tr>
<tr>
<td>Elkartek</td>
<td>35,9</td>
<td>4,9</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>306,9</strong></td>
<td><strong>40,1</strong></td>
<td><strong>13%</strong></td>
</tr>
</tbody>
</table>

Monitoring RIS3: The Case of The Basque Country
# RIS3 Advanced Manufacturing Priority: Resources Injected - 2017 Calls

## Summary: Budget, Grant and Number of Projects, Priority RIS3 Advanced Manufacturing by Programmes (M€, %, Nº, 2017 Calls)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Budget (M€)</th>
<th>Subsidy (M€)</th>
<th>No. of projects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Advanced</td>
<td>% Adv. Man. / Total</td>
</tr>
<tr>
<td></td>
<td>programme</td>
<td>Manufact.</td>
<td>programme</td>
</tr>
<tr>
<td>Hazitek (competitive)</td>
<td>163,9</td>
<td>93,5</td>
<td>57%</td>
</tr>
<tr>
<td>Hazitek (strategic)</td>
<td>106,9</td>
<td>84,5</td>
<td>79%</td>
</tr>
<tr>
<td>Elkartek</td>
<td>35,9</td>
<td>20,7</td>
<td>58%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>306,9</strong></td>
<td><strong>198,8</strong></td>
<td><strong>65%</strong></td>
</tr>
</tbody>
</table>

**Monitoring RIS3: The Case of The Basque Country**
RIS3 Biosciences and Health priority: resources injected-2017 calls

Summary: budget, grant and number of projects, priority RIS3 Biosciences and Health by programmes (M€, %, No, 2017 calls)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Budget (M€)</th>
<th>Subsidy (M€)</th>
<th>No. of projects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total programme</td>
<td>Biosciences and Health</td>
<td>Total programme</td>
</tr>
<tr>
<td>Hazitek (competitive)</td>
<td>163,9</td>
<td>23,1</td>
<td>25%</td>
</tr>
<tr>
<td>Hazitek (strategic)</td>
<td>106,9</td>
<td>6,5</td>
<td>6%</td>
</tr>
<tr>
<td>Elkartek</td>
<td>35,9</td>
<td>9,0</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>306,9</strong></td>
<td><strong>38,7</strong></td>
<td><strong>13%</strong></td>
</tr>
</tbody>
</table>
## Resources - achievement of the established goals:

### Resources indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D Public Resources (DDEC)</td>
<td>R&amp;D Public Resources DDEC (M€) / Budget GV (M€)</td>
<td>1,38%</td>
<td>1,21%</td>
<td>1,23%</td>
<td>1,33%</td>
<td>1,29%</td>
<td>1,49%</td>
<td>Green</td>
</tr>
<tr>
<td>Projects mobilised*</td>
<td>No. Supported projects / M€ approved subsidy</td>
<td>11,2</td>
<td>13,2</td>
<td>12,3</td>
<td>11,1</td>
<td>11,9</td>
<td>9,2</td>
<td>Orange</td>
</tr>
<tr>
<td>Representativeness group of supported companies*</td>
<td>Number of companies doing R&amp;D with GV support / total number of Basque companies with R&amp;D units</td>
<td>63%</td>
<td>60%</td>
<td>47%</td>
<td>46%</td>
<td>54%</td>
<td>59%</td>
<td>Green</td>
</tr>
<tr>
<td>Representativeness R&amp;D effort in support programmes</td>
<td>R&amp;D expenditure mobilised supported projects / GERD-Basque Country</td>
<td>24,0%</td>
<td>23,9%</td>
<td>24,2%</td>
<td>26,3%</td>
<td>24,5%</td>
<td>28,0%</td>
<td>Green</td>
</tr>
<tr>
<td>Representativeness R&amp;D Basque staff</td>
<td>No. of R&amp;D FTE people supported projects / total number of R&amp;D FTE personnel in the Basque Country</td>
<td>17,0%</td>
<td>17,0%</td>
<td>16,5%</td>
<td>18,5%</td>
<td>17,3%</td>
<td>19,4%</td>
<td>Green</td>
</tr>
<tr>
<td>R&amp;D budget mobilised per person</td>
<td>R&amp;D expenditure mobilised supported projects / number of people R&amp;D FTE supported projects</td>
<td>102 k€</td>
<td>89,1 k€</td>
<td>86,3 k€</td>
<td>83,9 k€</td>
<td>90,3 k€</td>
<td>104 k€</td>
<td>Green</td>
</tr>
</tbody>
</table>

* Concerning only company programmes

Goals established based on previous information of each indicator, as an average of the values obtained in the years 2013, 2014, 2015 and 2016
## Impact - achievement of the established goals:

### Impact indicators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on employment (scope)*</td>
<td>No. of beneficiaries that generate employment / total no. of beneficiaries</td>
<td>43%</td>
<td>56%</td>
<td>48%</td>
<td>53%</td>
<td>50%</td>
<td>48%</td>
<td>**</td>
</tr>
<tr>
<td>Efficiency in employment*</td>
<td>No. of jobs generated / M € of subsidy granted</td>
<td>15</td>
<td>17</td>
<td>13,3</td>
<td>15,2</td>
<td>15,3</td>
<td>14,0</td>
<td>**</td>
</tr>
<tr>
<td>Turnover impact (scope)*</td>
<td>No. of beneficiaries that increase their turnover / total no. of beneficiaries</td>
<td>55%</td>
<td>71%</td>
<td>59%</td>
<td>67%</td>
<td>63%</td>
<td>69%</td>
<td></td>
</tr>
<tr>
<td>Turnover efficiency*</td>
<td>M € of annual turnover attributable to the exploitation of the results of the project / M € of subsidy granted</td>
<td>4,3</td>
<td>6</td>
<td>5,6</td>
<td>6,0</td>
<td>5,5</td>
<td>6,5</td>
<td></td>
</tr>
<tr>
<td>Improvement of international positioning of beneficiaries*</td>
<td>No. of beneficiaries that improve their international position / total no. of beneficiaries</td>
<td>70% int 40% No int</td>
<td>56% int 38% no int</td>
<td>72% int 22% no int</td>
<td>71% int 23% no int</td>
<td>67% int 31% no int</td>
<td>64% int 22% no int</td>
<td>**</td>
</tr>
<tr>
<td>Impact on competitiveness*</td>
<td>No. of beneficiaries that obtain a key or important impact on their competitiveness / total no. of beneficiaries</td>
<td>46%</td>
<td>55%</td>
<td>52%</td>
<td>45%</td>
<td>50%</td>
<td>48%</td>
<td>**</td>
</tr>
</tbody>
</table>

**  Referred only to company programs

** Goals established as the average of the historical records of each indicator (2013-2015)

Goals established based on previous information of each indicator, as an average of the values obtained in the years 2013, 2014, 2015 and 2016.
The implementation of the RIS3 Galicia:

From a **double approach**:

<table>
<thead>
<tr>
<th>METHODOLOGY</th>
<th>WHO</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONITORING</td>
<td>Ongoing monitoring of the activities and the level of implementation. Monitoring the action plan</td>
</tr>
<tr>
<td>EVALUATION</td>
<td>Mid-term and Final</td>
</tr>
</tbody>
</table>
# RIS3 Evaluation & Monitoring Plan

**Dashboard**

<table>
<thead>
<tr>
<th>PERFORMANCE INDICATORS</th>
<th>CHALLENGE</th>
<th>INDICATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMMON FOR ALL PROGRAMMES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CALCULATION WILL BE DONE BOTH GLOBALLY AND SPECIFICALLY FOR EACH CHALLENGE OF THE RIS3 GALICIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nº of applications/projects presented (nº)</td>
<td>(total and by challenge)</td>
<td></td>
</tr>
<tr>
<td>Total nº of grants/projects awarded (nº):</td>
<td>(total and by challenge)</td>
<td></td>
</tr>
<tr>
<td>Nº of grants/awarded projects to SMEs (nº)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nº of grants/awarded projects to private research institution (nº)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nº of grants/awarded projects to public research institution (nº)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nº of grants/awarded projects to public institution (nº)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nº of grants/awarded projects to other entities (nº)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total budget granted (in €):</td>
<td>(total and by challenge)</td>
<td></td>
</tr>
<tr>
<td>Budget granted to SMEs (en €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget granted to private research institution (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget granted to public research institution (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget granted to public Institution (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Budget granted to other entities (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total mobilised investment (in €):</td>
<td>(total and by challenge)</td>
<td></td>
</tr>
<tr>
<td>Mobilised investment by SMEs (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilised investment by private research institutions (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilised investment by public research institutions (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilised investment by public institutions (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilised investment by other entities (in €)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Satisfaction (%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SPECIFIC FOR “INNOVA EN GALICIA” PROGRAMME**

| CALCULATION WILL BE DONE BOTH GLOBALLY AND SPECIFICALLY FOR EACH CHALLENGE OF THE RIS3 GALICIA | | |
| Private investment parallel to public support (€): | (total and by challenge) | |
| Risk capital investment (€): | (total and by challenge) | |

**SPECIFIC FOR “GALICIA TRANSFIERE” PROGRAMME**

| CALCULATION WILL BE DONE BOTH GLOBALLY AND SPECIFICALLY FOR EACH CHALLENGE OF THE RIS3 GALICIA | | |
| Number of agreements /transfer contracts signed between companies and supported research centres (nº) | (total and by challenge) | |
| Number of patents/models and licences requested by supported entities (nº) | (total and by challenge) | |
| Budget tendered through PPI (in €) | (total and by challenge) | |

**SPECIFIC FOR “EMPRENDIMIENTO INNOVADOR” PROGRAMME**

| CALCULATION WILL BE DONE BOTH GLOBALLY AND SPECIFICALLY FOR EACH CHALLENGE OF THE RIS3 GALICIA | | |
| Number of supported technological companies (nº) | (total and by challenge) | |

### Indicadores de Resultado

#### RETO 1: GESTIÓN INNOVADORA DE RECURSOS NATURALES Y CULTURALES

- Número de empresas (de 10 trabajadores o más) que realizan actividades innovadoras
- Retornos procedentes de proyectos europeos en Horizon 2020 por parte entidades gallegas
- Retorno alcanzado por empresas gallegas en licitaciones de Compra Pública de Innovación (CPI)
- Número de patentes/modelos solicitadas por entidades gallegas
- Número de spin-offs relacionados con el Reto 1

#### RETO 2: EL MODELO INDUSTRIAL DE LA GALICIA DEL FUTURO

- Número de empresas (de 10 trabajadores o más) que realizan actividades innovadoras
- Retornos procedentes de proyectos europeos en Horizon 2020 por parte entidades gallegas
- Retorno alcanzado por empresas gallegas en licitaciones de Compra Pública de Innovación (CPI)
- Número de patentes/modelos solicitadas por entidades gallegas
- Número de spin-offs relacionados con el Reto 2

#### RETO 3: SOLUCIONES TECNOLOGICAS PARA UN MODELO DE VIDA SALUDABLE

- Número de empresas (de 10 trabajadores o más) que realizan actividades innovadoras
- Retornos procedentes de proyectos europeos en Horizon 2020 por parte entidades gallegas
- Retorno alcanzado por empresas gallegas en licitaciones de Compra Pública de Innovación (CPI)
- Número de patentes/modelos solicitadas por entidades gallegas
- Número de spin-offs relacionados con el Reto 3

### TOTAL GALICIA

- Número de empresas (de 10 trabajadores o más) que realizan actividades innovadoras
- Coste en I+D privado
- Retornos procedentes de proyectos europeos en Horizon 2020 por parte entidades gallegas
- Retorno alcanzado por empresas gallegas en licitaciones de Compra Pública de Innovación (CPI)
- Número de patentes/modelos solicitadas por entidades gallegas
- Número de spin-offs
- Producción científica: porcentaje de excelencia

---

**MONITORIS3**

**Interreg Europe**

[Logo of Xunta de Galicia]
## Dashboard

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INPUT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>• Percentage of population between 30 and 34 years old with tertiary level of education</td>
<td>%</td>
<td>IGE</td>
<td>(2014)</td>
<td>45%</td>
<td>47%</td>
</tr>
<tr>
<td></td>
<td>• Investment on R+D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• R+D investment in relation to GDP</td>
<td>%</td>
<td>INE/IGE</td>
<td>(2014)</td>
<td>1.4%</td>
<td>1.7%</td>
</tr>
<tr>
<td></td>
<td>• R+D investment</td>
<td>€</td>
<td>INE/IGE</td>
<td>(2014)</td>
<td>500M€</td>
<td>525M€</td>
</tr>
<tr>
<td></td>
<td>• Scientific</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Scientific production. Number of documents</td>
<td>N°</td>
<td>SCOPUS</td>
<td>(2015)</td>
<td>+10%</td>
<td>+20%</td>
</tr>
<tr>
<td></td>
<td>• N.º of required patents from Galician entities</td>
<td>N°</td>
<td>OEPM</td>
<td>(2014)</td>
<td>+2.5%</td>
<td>+5%</td>
</tr>
<tr>
<td></td>
<td>• Number of innovative companies</td>
<td>N°</td>
<td>INE/IGE</td>
<td>(2014)</td>
<td>+5%</td>
<td>+15%</td>
</tr>
<tr>
<td></td>
<td>• Satisfaction level from agents with the R+D Galician system</td>
<td>Qualitative Ind.</td>
<td>GAIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• GVA related to Challenge 1</td>
<td>€</td>
<td>IGE</td>
<td>(2014)</td>
<td>+6%</td>
<td>+12%</td>
</tr>
<tr>
<td></td>
<td>• GVA related to Challenge 2</td>
<td>€</td>
<td>IGE</td>
<td>(2014)</td>
<td>+6%</td>
<td>+12%</td>
</tr>
<tr>
<td></td>
<td>• GVA related to Challenge 3</td>
<td>€</td>
<td>IGE</td>
<td>(2014)</td>
<td>+6%</td>
<td>+12%</td>
</tr>
<tr>
<td></td>
<td>• Registered employment in relation with Challenge 1</td>
<td>N°</td>
<td>IGE</td>
<td>(2014)</td>
<td>+5%</td>
<td>+10%</td>
</tr>
<tr>
<td></td>
<td>• Registered employment in relation with Challenge 2</td>
<td>N°</td>
<td>IGE</td>
<td>(2014)</td>
<td>+5%</td>
<td>+10%</td>
</tr>
<tr>
<td></td>
<td>• Registered employment in relation with Challenge 3</td>
<td>N°</td>
<td>IGE</td>
<td>(2014)</td>
<td>+5%</td>
<td>+10%</td>
</tr>
<tr>
<td></td>
<td>• Exports related with Challenge 1</td>
<td>€</td>
<td>IGE</td>
<td>(2014)</td>
<td>+10%</td>
<td>+20%</td>
</tr>
<tr>
<td></td>
<td>• Exports related with Challenge 2</td>
<td>€</td>
<td>IGE</td>
<td>(2014)</td>
<td>+10%</td>
<td>+20%</td>
</tr>
<tr>
<td></td>
<td>• Exports related with Challenge 3</td>
<td>€</td>
<td>IGE</td>
<td>(2014)</td>
<td>+10%</td>
<td>+20%</td>
</tr>
<tr>
<td>Economic Specialization</td>
<td>• Total employment</td>
<td>N°</td>
<td>IGE</td>
<td>(2014)</td>
<td>+50.000</td>
<td>+100.000</td>
</tr>
<tr>
<td><strong>ECONOMIC IMPACT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>• GDP</td>
<td></td>
<td>IGE</td>
<td>(2014)</td>
<td>Δ medio anual +2.5%</td>
<td>Δ medio anual +2.5%</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>• GDP per capita</td>
<td>% s/ media UE¹</td>
<td>IGE</td>
<td>(2014)</td>
<td>4 points to be reduced</td>
<td>8 points to be reduced</td>
</tr>
<tr>
<td>Exports</td>
<td>• Importance of exports in Galician GDP</td>
<td>%</td>
<td>IGE</td>
<td>(2014)</td>
<td>35%</td>
<td>40%</td>
</tr>
<tr>
<td>Society</td>
<td>• Satisfaction level from society with Galician R+D</td>
<td>Qualitative Ind.</td>
<td>GAIN</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Reduction of percentage points of the income per capita percentage over the EU.
MONITORING THE IMPLEMENTATION OF THE STRATEGY
Since December 2013:

- Monitoring the instruments directly managed by GAIN

- Monitoring changes in the competitiveness of the Galicia Innovation System: H2020 attracted by Galicia organizations (excellence)
Instruments directly managed by GAIN

<table>
<thead>
<tr>
<th>日期</th>
<th>GRANT</th>
<th>TOTAL INVESTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARCH 2017</td>
<td>429,3M€</td>
<td>786,0 M€</td>
</tr>
<tr>
<td>OCTOBER 2017</td>
<td>503,6M€</td>
<td>906,5M€</td>
</tr>
<tr>
<td>APRIL 2018</td>
<td>549,2M€</td>
<td>983,8M€</td>
</tr>
</tbody>
</table>

H2020 Results

<table>
<thead>
<tr>
<th>日期</th>
<th>数量</th>
<th>GRANT</th>
<th>参与类型</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARCH 2017</td>
<td>142</td>
<td>48,6M€</td>
<td>RTO: 41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>UNIVERSITIES: 37</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PUBLIC ADMINIST.: 18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FIRMS: 43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SMES: 35</td>
</tr>
<tr>
<td>OCTOBER 2017</td>
<td>206</td>
<td>53,9M€</td>
<td>RTO: 54</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>UNIVERSITIES: 51</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PUBLIC ADMINIST.: 23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FIRMS: 64</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SMES: 46</td>
</tr>
<tr>
<td>APRIL 2018</td>
<td>216</td>
<td>67,1M€</td>
<td>RTO: 56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>UNIVERSITIES: 55</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PUBLIC ADMINIST.: 23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FIRMS: 67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SMES: 49</td>
</tr>
</tbody>
</table>
H2020 Results: 2014-2017

- 84 Galician organizations
- Grant total 67,14 M€
- 2,38% of total Spanish
- 0,219% of total H2020 budget

SPECIALIZATION

Important participation in: NMBP, PPP Factories of the Future, Health & Bioeconomy

- Bioeconomy: 6,4% of the total Spanish
- PPP de Factories of the future: 6,7% of the total Spanish
RIS3 Galicia until summer 2018

Global Results

- Since 2013, **549,2M€** awarded as public **grants** for a total **investment** of **983,8M€** (total investment expected for the whole period: **1.600M€**)

Out of the 549,2 M€ granted:
- 481,8 M€ by Galicia and Spanish Administrations
- 67,4 M€ by H2020
RIS3 Galicia until summer 2018

Breakdown by challenge

- **Challenge 2** *(the Galicia future industrial model) has attracted* most of the resources: 72.9% of grants and 76.0% of the total investment.
- **Challenge 1** *(innovative management of natural and cultural resources)* has obtained 14.5% of grants and 13.3% of the total investment.
- **Challenge 3** *(new model for healthy life based on active ageing)* has received 12.1% of grants and 10.36% of total investment.

### Grants

- Reto 1: 14.50%
- Reto 2: 0.48%
- Reto 3: 12.10%
- Transversal: 72.91%

### Total investment

- Reto 1: 13.31%
- Reto 2: 10.37%
- Reto 3: 0.28%
- Transversal: 76.05%

* October 2017
RIS3 Galicia until summer 2018

Results per programme (% of total investment)

**SMEs INNOVATE**
Promoting incorporation of knowledge by SMEs

- Innovative SMEs to be competitive: 40.7%

**INNOVATE IN GALICIA**
Lever instruments as drivers for the attraction and mobilization of private capital

- Private investment mobilization: 31.1%

**GALICIA TRANSFER**
Instruments to promote transfer of knowledge from science and technology centres to the market

- Transfer from research to market: 25.0%

**INNOVATIVE ENTREPRENEURSHIP**
Support to increase entrepreneurship in knowledge-intensive and technology areas

- Opportunities for research and entrepreneurship: 3.2%
## RIS3 Galicia until summer 2018

### Implemented Instruments

<table>
<thead>
<tr>
<th>CALL</th>
<th>YEAR</th>
<th>AMOUNT 2016</th>
<th>AMOUNT 2017</th>
<th>AMOUNT 2018</th>
<th>AMOUNT 2019</th>
<th>AMOUNT 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIDADES MIXTAS (Innovate in Galicia)</td>
<td>2016</td>
<td>109.956,25</td>
<td>1.781,032,58</td>
<td>1.861.340,59</td>
<td>1.125.000,00</td>
<td>-</td>
</tr>
<tr>
<td>UNIDADES MIXTAS (Innovate in Galicia)</td>
<td>2017</td>
<td>-</td>
<td>424.000,00</td>
<td>1.825.000,00</td>
<td>1.600.000,00</td>
<td>1.151.000,00</td>
</tr>
<tr>
<td>CONECTA PYME (SME Innovate)</td>
<td>2016</td>
<td>7.009.776,90</td>
<td>9.526.758,93</td>
<td>6.128.696,55</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>INNOVA PEME (SME Innovate)</td>
<td>2017</td>
<td>-</td>
<td>801.716,62</td>
<td>3.929.815,00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>FORTALECIMENTO CENTROS (Galicia Transfers)</td>
<td>2018</td>
<td>-</td>
<td>-</td>
<td>4.041.407,53</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>7.119.733,15</strong></td>
<td><strong>12.533.508,13</strong></td>
<td><strong>17.786.259,67</strong></td>
<td><strong>2.725.000,00</strong></td>
<td><strong>1.151.000,00</strong></td>
</tr>
</tbody>
</table>

**Instruments still under planning:**
Cooperation H2020 and Technology Vouchers
RIS3 Galicia until summer 2018

Lessons learnt: new steps

- Focus investment in instruments aimed to foster collaboration between RTOs and industry on a stable and lasting manner and with high potential to mobilize private funding.

- Implementing an efficient instrument to increase H2020 benefits in Galician organisations.

- Advancing on smart specialization: cross-matter to all instruments.

PLAN GALICIA INNOVA 2020:
new framework for the RIS3

ARTICULATING A NEW PUBLIC SUPPORT SYSTEM TO R+D+i, self-sustainable post 2020
For the RIS3 MID-TERM REVIEW, need to improve monitoring facing “critical” issues common to most regions:

a) INDICATORS ON IMPLEMENTATION:

a.1) Broadening the scope of the survey:
- Multisector approach: Other bodies in the regional and national administrations
- Multifund approach other than GAIN: All ESIF + Own Funds

a.2) Calculating specific indicators

b) INDICATORS ON RESULTS:

MAIN DIFFICULTY: ACCESS TO DATA

RIS3 CHALLENGES & PRIORITIES / CONVENTIONAL CLASSIFICATION: ej. NACE
REVIEW & EVALUATION
RIS3 Mid-Term Review

**Aim:** Identifying positive and negative deviations, and suggest corrective actions in the form of a Contingency Plan to improve the Strategy (if necessary): re-focusing priorities, including new programmes.

**METHODOLOGY: PARTICIPATORY PROCESS** continuation of the one opened to define the RIS3.

* Review criteria: relevance, efficacy and efficiency

---

Instruments to collect the RIS3 information for monitoring and evaluation

- Dashboard (indicators)
- Questionnaires to public grants beneficiaries and stakeholders of the Galicia Innovation System
- Forums and expert panels
- Questionnaires to quadruple helix

---

First approach to opinions about IMPACT of RIS3 in Galicia
RIS3 Mid-Term Review: some tips

GALICIA INNOVA 2020 PLAN (new instrumental framework for the RIS3) as the bases for the mid-term review process

Organisation of information:

- New tools to collect and manage information (databases, integration of information.....)
- Formatting information, multi-source information (other departments in the Galician government, Galicia ERDF managed by central government.....)
- Online data management tools
RIS3 Mid-Term Review: some tips

GALICIA INNOVA 2020 PLAN (new instrumental framework for the RIS3) as the bases for the mid-term review process

Analysing information and statistics:

- RIS3 Advisory Board (organisations involved in RIS3 definition)
- International Advisory Board (EC, other European regions, Spanish Government, etc.)
- Independent Experts Board (Academics, R+D+I experts, etc.)
- Thematic WGs: Challenge 1 / Challenge 2 / Challenge 3 (quadruple helix, grants beneficiaries)
Thanks

Questions welcome
Monitoring of results at the CDTI

Diciembre 2018

MARÍA-ASCENSIÓN BARAJAS IÑIGO
ascension.barajas@cdti.es
Index

I. Monitoring and Evaluation (M&E) at the CDTI
II. M&E: part of the operational cycle
III. Data collection
   a) Administrative database and external data
   b) Surveys
IV. Communication and use of results
I. Monitoring and Evaluation

EX - ANTE EVALUATION
INTERIM EVALUATION
EX – POST EVALUATION

PROGRAM

STAR
DEVELOPMENT
MONITORING
END
I. Monitoring and Evaluation at the CDTI

Case studies:
Perspectiva CDTI

Impacts on society

Effects and impacts on the firm

Firms’ results

Agency’s results

Activities

Resources

......

Impact Evaluation:
Documentos CDTI

Monitoring of results:
Cuadernos CDTI

Traditional operative reporting:
Plan Operativo Anual, Memoria
I. Monitoring and Evaluation at the CDTI

- **Continuous Learning**
  - Training
  - Mutual learning (network)

- **Data bases**
  - Internal
  - External

- **Staff**
  - M&E unit (2+1)
  - External experts

- **Processes**
  - Monitoring & Impact Evaluation

---

CDTI Centro para el Desarrollo Tecnológico Industrial | E.P.E.
II. M&E: part of the operational cycle

- R&D proposal
  - Rejected proposal
  - Granted proposal
  - Technical and financial evaluation
  - Program diffusion

- Program design
- Technical development

- M&E Unit
  - Monitoring & Impact Evaluation
  - Database for M&E

- Internal and external communication of results
- Final Results and Ex-post Surveys
- External databases

CDTI Centro para el Desarrollo Tecnológico Industrial | E.P.E.
III. Data collection

Internal data bases

- **CDTI administrative database**: information related to Spanish firms’ participation in funding programs managed by CDTI.
- **Results and ex-post surveys**: ad-hoc surveys carried out after the development phase of the project and two years after the commercial launching.

External data bases

- **EIT (Encuesta de Innovación Tecnológica) & PITEC** databases conducted by INE (Instituto Nacional de Estadística). Spanish version of the Community Innovation Survey.
- **SABI** (Iberian Balance Sheet Analysis System), contains the company accounts of more than 1,000,000 Spanish firms.
III.a CDTI administrative database

Generated during the operative management of the aid instruments, following a continuous and well-structured procedure according to these principles:

- Data are stored and managed from an integrated perspective. A corporate software application has been developed to cover information requirements on every programme and aid instrument managed by CDTI.
- Information collection covers the whole live-cycle of projects (application; selection phase; aid granting; technological development; payments; loan reimbursement).
- Information is available at company level and at project level.

- Companies should be registered on the CDTI website and submit requested data using the available standard form (company general data and detailed description of the project).
- The aid granting decision is also documented according to a standard form.
- International standards are applied (e.g. NACE cods).

- Information on companies is contrasted using official sources (Spanish Commercial Register).
- Information updating is supervised by CDTI personnel under quality and reliability criteria.
III.a External datasets

• **EIT (Encuesta de Innovación Tecnológica)** database conducted by INE (Instituto Nacional de Estadística). It is the Spanish version of the Community Innovation Survey (CIS), following the OECD's Oslo Manual. The main objective of the Survey, which is carried out annually, is to offer direct information regarding the innovation process in companies, providing a sample of over 40,000 companies.

• **PITEC (Panel de Innovación Tecnológica).** PITEC is a panel data collected also by INE departing from the annual responses to the Survey on Innovation in Companies (EIT). It is based on a representative selection of firms, which makes it possible to carry out repeated observations of the economic units included over time and thereby develop much more precise estimations. Four non-excludable samples: (i) firms with 200 or more employees, (ii) firms with internal R&D expenditures, (iii) firms with fewer than 200 employees with external R&D expenditures but which carry out no internal R&D, and (iv) firms with fewer than 200 employees with no innovation expenditures.

• **SABI (Iberian Balance sheet Analysis System).** Commercial database, prepared by Bureau van Dijk, which contains general information and annual accounts of over 1.25 million Spanish companies. Data are obtained from official sources, mercantile registries, BORME (the Mercantile Registry's official gazette), the press, etc. and are continually updated. CDTI hires this information service, available for authorized personnel. The SABI database could be used to extend the financial information on firms.
III.b Results Monitoring System

• From 2011 for “open-call” instruments and from 2018 for the rest.

• Adapted to the project cycle
III.b Results Survey

- Electronic survey, available to firms at the official CDTI software application
- Mandatory
- Completed after finishing the technological development of the R&D project
- One questionnaire per finished project

- Designed according to the Community Innovation Survey, including other questions relevant to the specific case of CDTI projects.
- Information blocks:
  - **Firm activity**: general indicators (sales; exports; R&D expenditures; previous experience in R&D
  - **Technological results** (innovations in products and processes; patents; new R&D lines; new technological capabilities; new collaborations)
  - **Economic results** (expectations of sales and exports due to the project; new investments; job creation)
  - **Impact on the innovative culture** (strategic planning of R&D activities; R&D staff recruited)
  - **Additionality of CDTI aids**: Could have been the project accomplished without the aid?
III.b Ex-post Survey

- Electronic survey, available to firms at the official CDTI software application
- Not mandatory
- Completed two years after the market launching date (declared by firms in the Results Survey)
- One questionnaire per finished project

- Focused mainly on the economic and commercial impacts of the projects:
  - **Commercial impact:** commercial success (YES/NO); reasons for commercial failure; new markets; national and international market share.
  - **Economic impact:** real sales and exports due to the project; real investments (productive systems, R&D and/or commercial channels)
  - **Impact on innovative capabilities:** new R&D lines; new technological capabilities; new R&D partners.

- Questions related to **the participation in CDTI programmes**:
  - Application for more CDTI low-interest credits after the project
  - Participation in international R&D programmes managed by CDTI (Horizon 2020; Eureka; bilateral programmes...)

CDTI Centro para el Desarrollo Tecnológico Industrial | E.P.E.
IV. Communication of results
IV. Communication of results

The Impact of CDTI projects on corporate innovation capability (% projects)
IV. Communication of results
IV. Communication of results

Fulfilment of commercial expectations (number of projects and %)
Factors with a significant impact on the probability of commercial expectation fulfilment (% of change in probability)
IV. Communication of results

In conclusion, the commercial success of R&D projects is benefitted when the company is medium size, has in-house R&D capability and sufficient capacity to position itself in the market with an innovation-related business strategy, supported by additional investments and with a clear export focus.

Although companies' commitment to R&D is necessary to guarantee the success of their innovations in the market, other factors are in place that may have a noteworthy influence on achieving this success. Some of these factors, such as activity in overseas markets or fixed capital investments, are part of the business strategy. This shows that, in order to be successful, innovation must receive strong support and match the company's corporate strategy.
¡Muchas gracias!
+info sobre programas y ayudas CDTI para proyectos de I+D empresarial e innovación

@CDTIoficial